SEARS CANADA

DEPT. 731A

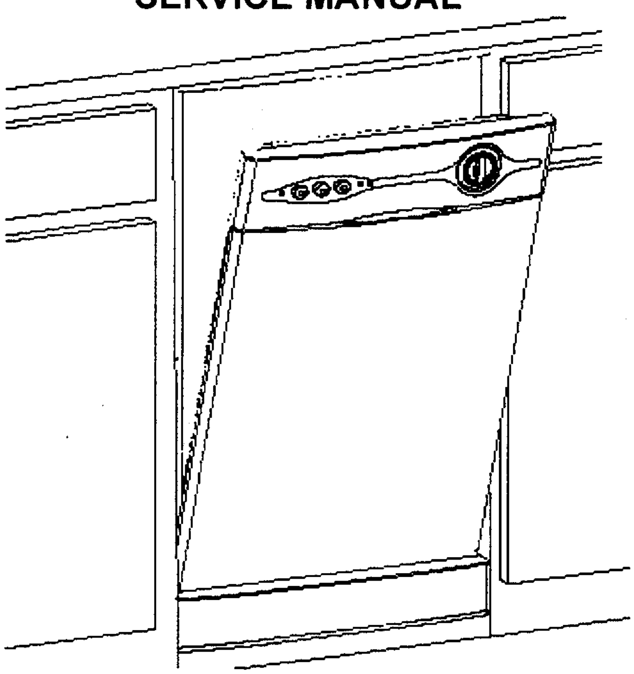
TECHNICAL FLASH

Service Branch Manager
Assistant Service Branch Manager
Call Centre Manager
Quality Education Leader

T.F. 22-172
OCTOBER 2004

CLAUDE BABINEAU – S/731A

DIVISION 22
461
DANBY
DISHWASHER
DDW1802 - 14352
DDW1805 - 17352
SERVICE MANUAL



CLAUDE BABINEAU– DEPARTMENT 731A
CHRIS BURNELL- DEPARTMENT 731A

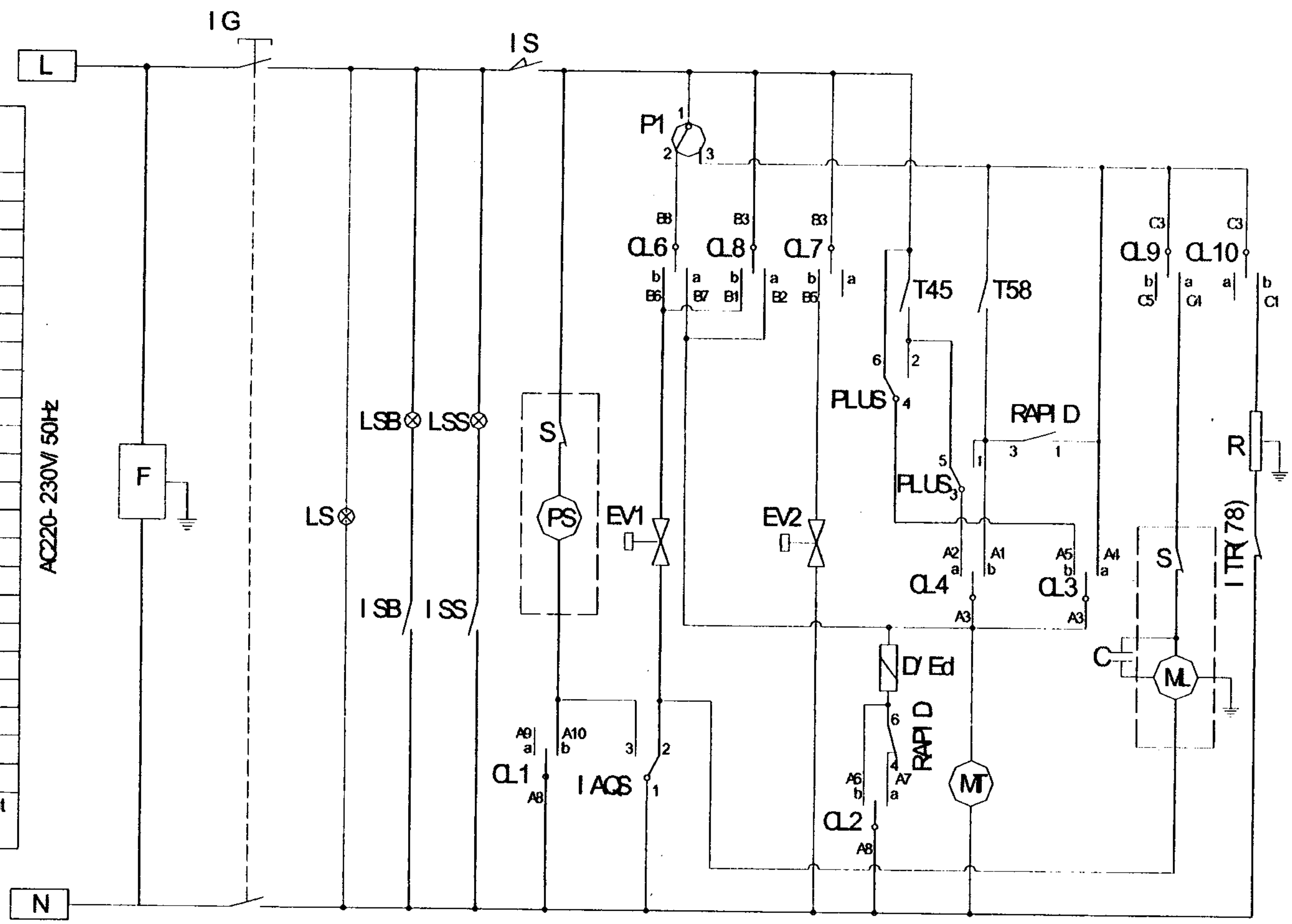
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SPECIFICATION

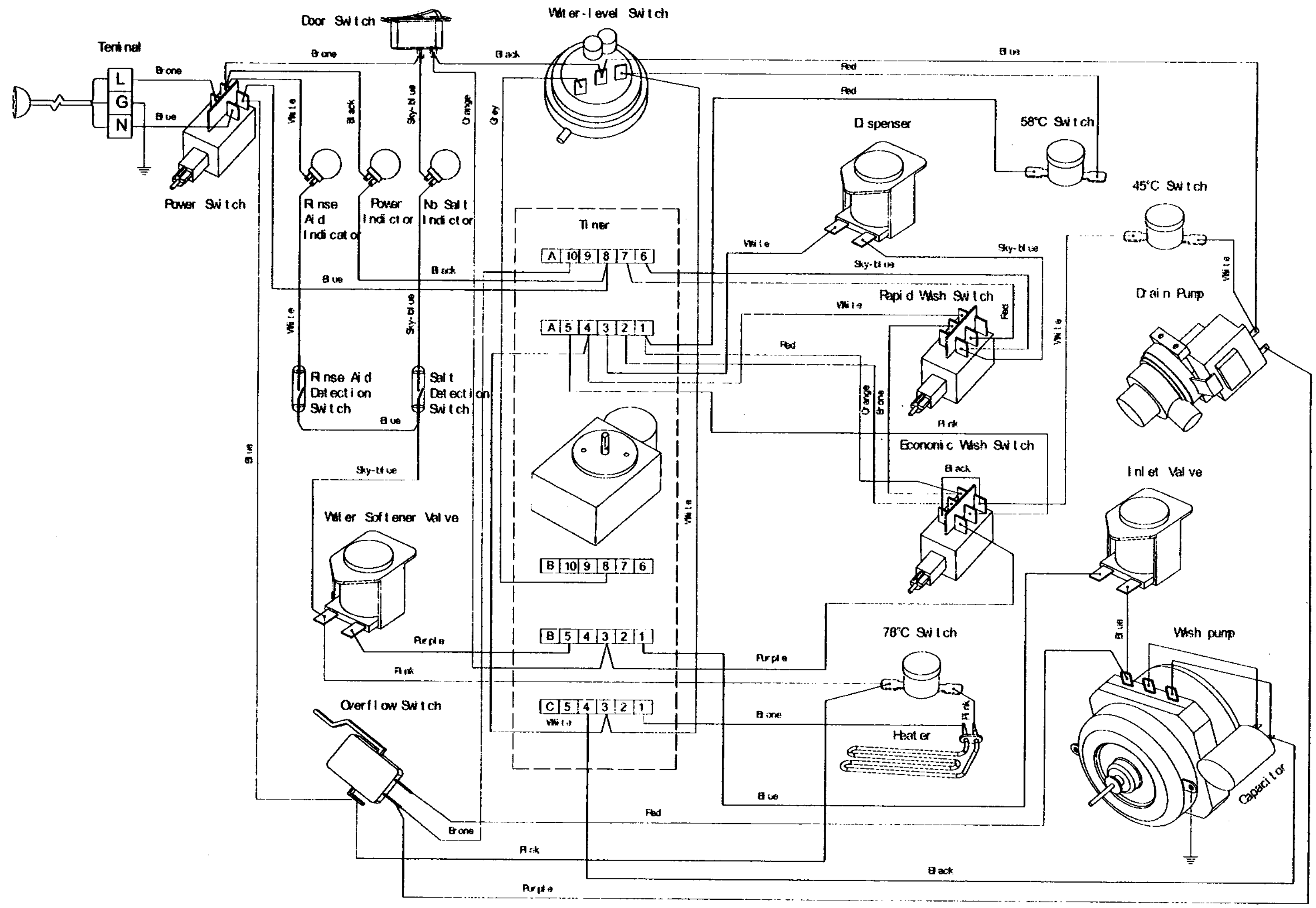
MODEL	DDW1802 and DDW1805
ELECTRICAL	
Rating	120V 60Hz
Motor (HP)	1/5
Motor (Amps)	
Heater Wattage	1000W
Wash	
Total Amps (Load Rated)	9.2A
Thermostat Contacts Close at	127°F ±5°F 58□±3□
WATER SUPPLY	
Suggested Min. Incoming Water Temperature	120°F to 150°F 49□ to 66□
Pressure (PSI) Minimum/Maximum	15/120 PSI
Connection (NPT)	3/8"
Consumption (Toil Gallons)	3.5±5%
Water Valve Flow Rate (GPM)	1.08GPM±10%

DDW1802W AND DDW1805W Schematic Diagram of Dishwasher

CODE	NAME OF COMPONENT
CLn	Contact of timer
D'Ed	Dispenser
EV1	Solenoid
EV2	Water softener
IAQS	Overflow switch
IG	Power Switch
IS	Door switch
ISS	Reed switch
ITR	Thermostat of heater
LS	Power on light
LSS	Salt warning light
ML	Wash pump
MT	Timer
PO	Pressure switch
PS	Drain pump
R	Heater
S	Thermostat of pump
T45	45°C Thermostat
T58	58°C Thermostat
RAPID	Rapid wash
PLUS	Intensive wash
ISB	Reed switch
LSB	Rinse aid warning light



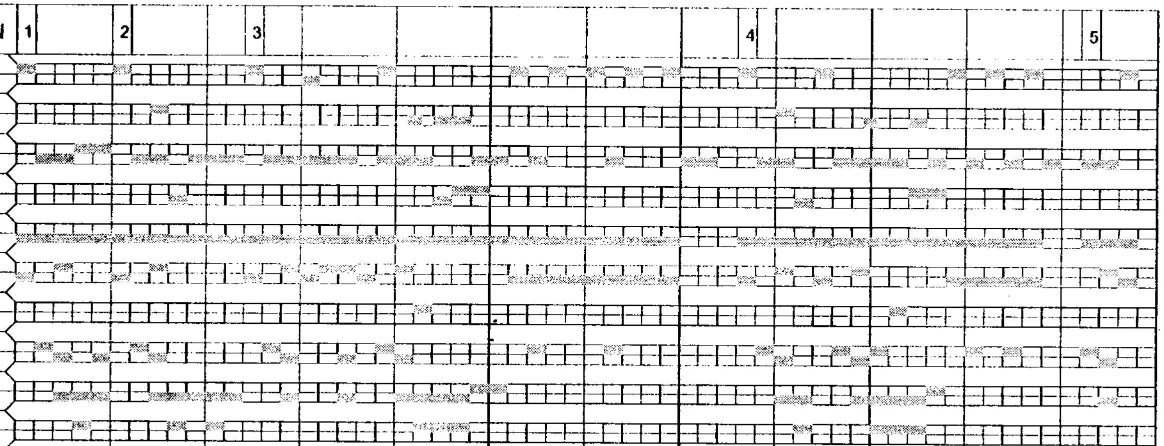
DDW1802W AND DDW1805W Wiring Diagram of Dishwasher



TIMER CYCLE CHART

DDW1802W AND DDW1805W Programe Cycle of Dishwasher

CAM No.		Fixed Cont.	Moving Cont.	PROGRAMME FUNCTION
1	B	A	10	Drain
	A		9	
2	B	A	6	Detergent
	A		7	Rinse Aid
3	B	A	5	Thermostat T45
	A		4	Timer Full Level
4	B	A	1	Thermostat T58
	A		2	Thermostat T45
5	B	B		
	A		9	
6	B	B	6	EV1 Fill
	A		7	Timer Empty Level
7	B	B	5	EV2 Regeneration
	A			EV1 Refill
8	B	B	1	Extra Drain
	A		2	Timer Empty Level
9	B	C	5	
	A		4	Wash Pump
10	B	C	1	Heater
	A			



STEP	TIME OF PROGRAMME	
1	V+15"	Drain
2	P+15"	Inlet
3	P+5.5'	Inlet +Wash
4	T+1'	Wash+Heat (45)
5	5.5'	Wash
6	V+90" /2'	Drain
7	P+15"	Inlet
8	P+5.25'	Inlet +Wash+Detergent
9	T+30"	Wash+Heat
10	5.5'	Wash
11	5.5'	Wash
12	5.5'	Wash
13	V+2'	Drain
14	P+15"	Inlet
15	P+5.25'	Inlet +Wash
16	30"	Pause(Drain)
17	P+15"	Pause(Inlet)
18	5.25'	Wash(Inlet +Wash)
19	V+90"	Drain
20	P+15"	Inlet
21	P+5.25'	Inlet +Wash
22	5.5'	Wash+Heat +Regenerate
23	T+15"	Wash+Heat +Brilliant (45)
24	T+5.25'	Wash+Heat +Brilliant (58)
25	5.5'	Pause
26	5.5'	Pause
27	V+90"	Drain
28	15"	Inlet
29	V+45"	Drain
30	1'	Pause
31	15"	Drain
32	15"	Inlet
33	30"	Drain
34	1'	Pause
35	1'	Drain
36	----	Stop
37		
38		
39	V+15"	Drain
40	P+15"	Inlet
41	P+5.5'	Inlet +Wash+Detergent
42	T+30"	Wash+Heat (45/58)
43	V+90"	Drain
44	P+15"	Inlet
45	P+5.25'	Inlet +Wash
46	7.5"	Wash+Heat +Inlet
47	97.5"	Wash+Heat +Regenerate
48	T+5.25'	Wash+Heat +Brilliant (58)
49	5.5'	Pause
50	V+1'	Drain
51	15"	Inlet
52	V+45"	Drain
53	30"	Inlet
54	15"	Drain
55	----	Stop
56		
57	P+15"	Inlet
58	P+5.25'	Inlet +Wash
59	V+90"	Drain
60	----	Stop

SPECIFICATION:

V----Resetting of Pressure Switch

P----Setting of Pressure Switch

T----Setting of Thermostat

COMPONENT OPERATION AND REPAIR

SAFETY PRECATIONS

Always turn off the electric power supply before servicing any electrical component, making ohmmeter checks, or replacing any parts.

All voltage checks should be made with a voltmeter having a full scale range of 130 volts or higher.

After service is completed, be sure all safety-grounding circuits are complete, all electrical connections are secure, and all access panels are in place.

TIMER

With the timer, user selects the various cleaning cycles of the dishwasher. The timer controls all the electrical functions of the dishwasher in all stages of each cycle. All functions can be traced on the chart. Diagram provided in this service manual.

To Test The Timer

If the timer is suspected of faulty operation, reference timer chart and electrical schematic diagram and proceed as follows:

1. Index the timer to the first increment of the normal cycle, which is a drain period.
2. If the pump motor fails to operate during the first cycle increment, check for power at the pump motor connector block, if there is no power check the door latch switch, if there is power, check the pump motor as described in this section.
3. If the pump motor does operate, let the timer motor advance the timer through the drain increment to determine if the timer motor and drive train are fully operative.
4. Let the timer advance, or index it forward to the portion of the cycle in question.
5. If a component controlled by the timer fails to function as the timer advances through the cycle, check for voltage at the timer terminals. If the check voltage is supplied to the component, check the component as described in this section.

   Continuity through timer contacts, other controls, and wires can also be checked with an ohmmeter with electrical power disconnected.

   If the timers contacts fail to close in the sequence shown on the timer chart are burned (have resistance measurable with an ohmmeter), or if timer does not advance automatically, replace the timer.

To Replace Timer

1. Disconnect dishwasher from electrical supply.
2. Remove the timer knob.



Figure 1

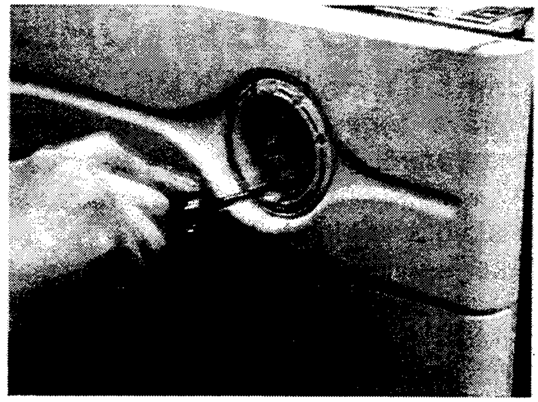


Figure 2

3. Remove the screws which locking the control panel (See figure1). Remove the knob and unscrew the two screws which locking the timer on the control panel. (See Figure 2.)
4. Take down the damaged timer and install a new timer, reverse procedures to complete repairs. (See figure 3and 4.)

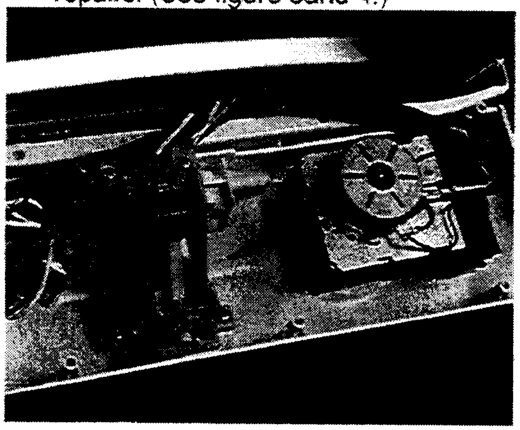


Figure 3

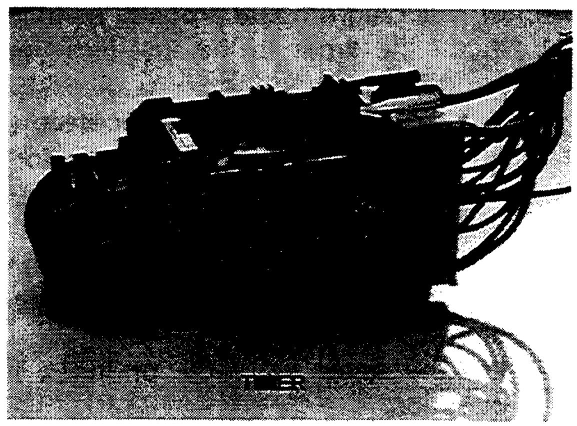


Figure 4

DOOR LATCH AND SWITCH ASSEMBLY

The latch and switch are located in the door assembly behind the control panel. The dishwasher will not operate until the door is closed; the latch engages the door catch.

To Test Or Replace Door Switch.

1. Disconnect dishwasher from electrical supply.
2. Remove screws securing the control panel to the inner door (See Figure 1).
3. Remove wire leads from latch switch.
4. Use ohmmeter and check switch for continuity.
5. If the switch tests is good.
   Check dishwasher electrical power.
   Check to see if timer is defective.

If switch is defective remove door switch from latch assembly.

6. Install new switch and reverse procedures to complete repairs.

To Replace Door Latch Assembly

1. Disconnect dishwasher from electrical supply.
2. Remove screws securing the control panel to the inner door.
3. Remove wire leads from door latch and remove screws securing door latch assembly to inner door. (See Figure 5.)

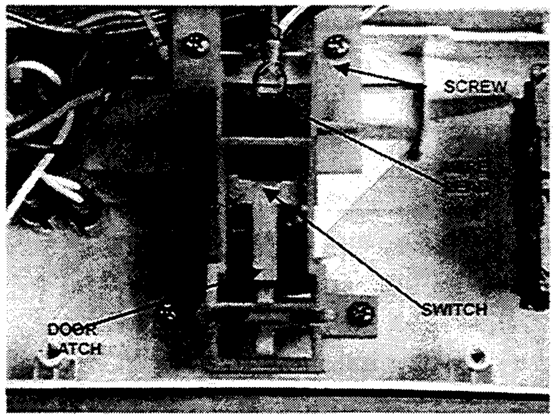


Figure 5

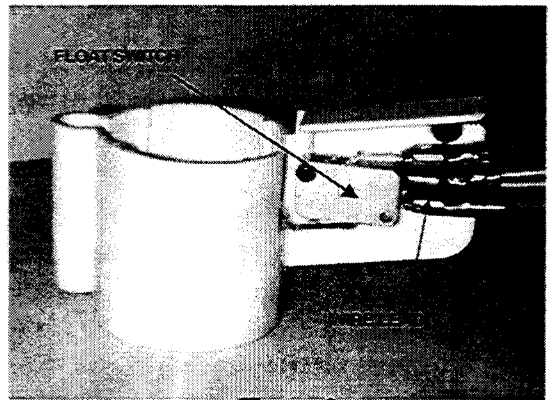


Figure 6

4. Install new door latch assembly and reverse procedures to complete repairs.

FLOAT SWITCH ASSEMBLY

The water float assembly is located in the right lower side of the dishwasher (the portable located behind the lower front crosspiece). When too much water enter the dishwasher, the water will enter the float support through the overflow pipe, the float will make the floating switch acts, the electrical supply to the water valve will disconnected and the drain pump keep on working.

If the switch fails to operate, check the following:

- Loose connection at the switch terminal.
- Switch not installed properly.
- Warped stem on float, not contacting the actuator blade.
- Float support restricts free float movement.
- Check if the float support is cracked.
- Food or foreign material restricting free float movement.
- If the rubber cap lost(See figure7).

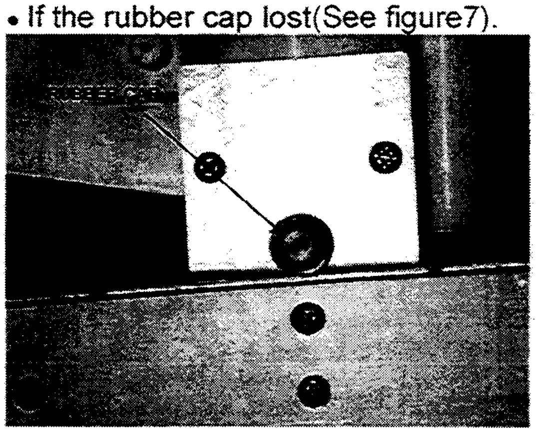


Figure 7

To Remove Or Replace Float Switch

1. Disconnect dishwasher from electrical supply.
2. Remove electrical leads to float switch.
3. Take down the switch from float support.
4. Install new float switch and reverse procedures to complete repairs (See figure 6).

TROUBLESHOOTING

The troubleshooting cheek list is common for all dishwasher models. They use different parts to accomplish the same thing and diagnosis will remain similar.

When a problem arises, and a possible cause is listed, follow the test, remove or replace procedures as outline in this service manual. The wiring diagram, shematic and timer cycle chat is a necessity when making electrical checks. In most cases an ohmmeter will handle all the tests necessary.

For checking any particular cycle of operation, it absolutely necessary that the cycle be set up as outlined in the product owner's guide.

SYMPTOM	CHECK THE FOLLOWING	REMENDY
Dishwasher will not operation when turn on	•fuse (blow nor tripped) •Supply line receptacle, wiring harness. •Timer (contacts open or burnt). •Motor (inoperative, check resistances). •Door switch (open contacts) •Door latch not making contact with door switch.	Replace fuse or reset breaker. Repair or replace. Replace timer. Replace motor. Replace door switch. Replace or adjust to make contact.
Dishwasher stop washing but draining	• Overflow occur.	Check the reason of overflow pull out the rubber cap wait for a minute let water pour out.
Water can't pour out from float support when pull out the rubber cap.	• Hole in the float supply is jammed.	Suck with dust cleaner or other let water pour out.
Dishwasher runs but not heat	•heater element (open). •Timer contacts (open or burnt). •Wiring or terminal (burnt or broken). • Thermostat is closed.	Replace heater element. Replace timer. Repair or replace. Replace.
Dishwasher will not stop.	•Timer motor (inoperative). •Wiring or terminal (burnt or broken). •Timer (open or burnt contact).	Replace timer. Repair or replace. Replace timer.
Dishwasher runs with door open	•Defective door safety switch.	Replace door safety switch.
Motor hums but will not start or run.	•Start winding(open). •Motor (bad bearings or locked rotor).	Replace motor. Replace motor.
Motor trips out on in terminal thermal overload protector.	•Start relay not dropping out. •Improper voltage. •Seal faces binding. •Motor shaft binding. •Motor windings shorted. •Glass or foreign items in pump.	Replace start relay. Check voltage. Repair or replace. Repair or replace. Repair motor. Clean and clear area.

Repeated dishwasher cycles	•Timer (contacts open or burnt) •Motor (inoperative, check resistances).	Replace timer. Replace timer.
Timer does not advance automatically.	•Timer motor (stalled or open). •Check timer for power to timer motor. •Timer shaft binding or knob interference to escutcheon.	Replace timer. Replace timer. Repair or adjust.
Dishwasher will not fill with water.	•Water supply turns off. •Defective inlet valve. •Check valve screen for obstructions. •Defective float switch. •Timer contacts (open or burnt). •Wiring (broken or burnt).	Turn water supply on. Replace inlet valve. Disassemble and clean screen. Replace switch. Replace timer. Repair or replace.
Incomplete water fill.	•Low water pressure. •Clogged water inlet valve screen. •Timer advanced past start of fill cycle. •Heavy water supply usage elsewhere in home. •Kinked or restricted fill hose, water inlet valve to fill tunnel.	Minimum water pressure of 15P.S.I Clean water inlet valve screen. Instruct customer/user to turn timer dial to start indicator mark. Use dishwasher when water usage is at a minimum. Correct as needed.
Too much water fill.	•Water inlet fill valve defective. •Timer contacts (open or burnt). •Float arm binding or out of adjustment. •Possibility customer/user turned timer past drain cycle.	Replace water inlet fill valve. Replace timer. Repair, adjust or replace. Instruct customer/user.
Dishwasher will not pump out.	•Drain pump is restricted. •Damaged impeller. •Wiring or terminal (contacts open or burnt).	Clear restrictions. Replace drain pump. Replace timer.
Water siphons out.	•Drain hose loop to low. •Drain line connected to a floor drain not vented.	Move to proper height. Install vent air gap at counter top.
Water leaks.	•Spray arm not rotating or split. ● Overcharge of water. •Tub seal (torn, worn or loose). •Dishwasher door not sealing properly. •Dishwasher is not level. •Overburden (wrong type of detergent). •Hose clamps loose. •Heater element mounting nuts loose. •Water seal leaking. •O-ring is not in position. •Motor and pump assembly not seated proper in tub liner bottom.	Check for proper rotation or replace spray arm. Check and correct for proper fill. Replace tub seal. Adjust door latch assembly and/or strike. Level dishwasher properly. Instructs customer/user. Tighten all clamps securely. Tighten the nut. Use a new water seal. Adjust the ring or replace a new. Replace seal.
Poor wash ability.	•Spray arm not rotating. •Improper loading of dishes, pans and other. •Detergent dispenser inoperative. •Insufficient amount of detergent. Or the detergent is old. •Damaged or the impeller is broken. •Detergent not dissolve.	Check for proper rotation. Instructs customer/user on proper loading per owner's guide. Repair or replace dispenser. On proper amount of fresh deter gent to use. Replace pump assembly. Incoming water temperature of 140°F is required to proper dissolve detergent.

Poor drying of dishes	•Improper loading of dishes, pots and other. •Heating element (open). •Incoming water temperature too low. •Wiring or terminal (broken or burnt).	Instruct customer/user on proper loading per owner' s guide. Replace heating element. Incoming water temperature of 140°F for best drying results. Replace or repair.
Detergent cup will not open.	•Cup binding. •Roll pin retainer or shaft broken. •Defective bi-metal. •Timer contact (open or broken).	Repair or replace. Replace pin, retainer or shaft. Repair or replace. Replace timer.
Door will not lath.	Door latch damaged.	Replace door latch.
Rinse agent liquid will not eject.	•Electromagnetic valve defective. •Rinse agent dispenser not mounted correctly. •Plunger stuck or held in closed position.	Replace valve. Mount securely to rear of inner door panel. Free plunger or adjust plunger release.
Rinse agent liquid leaks.	•Container cracker or broken. •Defective seal on plunger. •Over filling container.	Replace container. Replace plunger. Follow instructions in owner's manual.
Noisy pump assembly.	•Impellers not properly shimmed or rubbing. •Pump parts not properly installed. •Debris in bottom of tub sump area. •Defective motor bearings.	Use shim gauge furnished in impeller and seal kit, when seals are properly shimmed the impellers will be in correct operating position. Inspect and correct. Clean out sump area. Replace motor.
Dishwasher continues to fill or continues to fill even though in case of there is no voltage to fill valve.	•Something (dirt or foreign material) under diaphragm in water inlet valve. •Defective water inlet fill valve.	Clean water inlet valve or replace. Replace water inlet valve.
Detergent left in dispenser.	•Detergent cup held or blocked by large dishes. •Dispenser wet when detergent was added.	On proper loading dishes. Instructs customer/user.
Softener leaking	•Softener broken. •Softener nut loosen.	Replace softener. Screw down softener cap.
Leaking form air inlet.	•Air inlet nut loose. •Air inlet install up side down.	Screw down air inlet nut. Reinstall air inlet properly.